

# Material Safety Data Sheet

Date Last Revised: January 4, 2000

## SECTION 1. CHEMICAL IDENTIFICATION

Name: Specialty Steels and Carbides for Cutting Tools  
Synonyms: High Speed Tool & Die Steel and Carbide  
CAS #: Various – see section 2

## SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Family: Ferrous and Nonferrous Alloys  
Chemical Formula: N/A

(all exposure limits in mg/m<sup>3</sup>)

Material	CAS Number	OSHA TWA	ACGIH TWA	Carcinogenic Assessment
Aluminum	7429-90-5	15 total dust 5 respirable	10 total dust 5 respirable	Not listed by NTP, IARC or OSHA
Carbon Black	1333-86-4	3.5	3.5	IARC 2B
Chromium Metal	7440-47-3	1.0	0.5	IARC 3
Cobalt Metal	7440-48-4	0.1	0.02	IARC 2B
Iron (limits for Fe in Fe <sub>2</sub> O <sub>3</sub> )	7439-89-6	10	5	Not listed by NTP, IARC or OSHA
Manganese	7439-96-5	5 (ceiling)	0.2	Not listed by NTP, IARC or OSHA
Molybdenum	7439-98-7	5 soluble 15 insoluble/total	5 soluble 10 insoluble/total	Not listed by NTP, IARC or OSHA
Nickel Metal	7440-02-0	1	1	IARC 2B
Silicon	7440-21-3	5 respirable 15 total	10	Not listed by NTP, IARC or OSHA
Titanium Dioxide	13463-67-7	15	10	IARC 3
Tungsten	7440-33-7	5 respirable 15 total	1 respirable 5 total	Not listed by NTP, IARC or OSHA
Vanadium Pentoxide (V <sub>2</sub> O <sub>5</sub> )	1314-62-1	0.5 ceiling – dust 0.1 ceiling – fume	0.05 dust 0.05 fume	Not listed by NTP, IARC or OSHA

IARC 2B: The substance is possibly carcinogenic to humans. This category is generally used for substances for which there is limited evidence in humans in the absence of sufficient evidence in experimental animals. It may also be used when there is inadequate evidence of carcinogenicity in experimental animals.

IARC 3: The substance is unclassifiable as to carcinogenicity in humans.

## SECTION 3: HAZARDS IDENTIFICATION

The terms "hazardous" and "hazardous materials" as used within this MSDS should be interpreted as by, and in accordance with, the OSHA Hazard Communication Standard (29CFR1910.1200) including cited appendices, lists, references, etc.

WE DO NOT CONSIDER THE PRODUCT IN THE FORM THAT IT IS SOLD TO CONSTITUTE A PHYSICAL OR HEALTH HAZARD. SUBSEQUENT OPERATIONS SUCH AS ABRADING, MELTING, CUTTING OR PROCESSING IN ANY OTHER FASHION MAY PRODUCE POTENTIALLY HAZARDOUS DUST OR FUME THAT CAN BE INHALED, SWALLOWED OR COME IN CONTACT WITH THE SKIN OR EYES.

THE FOLLOWING TABLE ADDRESSES EXPOSURE TO DUST AND FUME.

Primary routes of entry:	Inhalation, eye contact, skin contact, ingestion
Effects of overexposure:	None expected with solid material. Prolonged, repeated exposure, in excess of the limits stated in Section 2, to dusts or fumes generated during heating, cutting, welding or brazing may or may not cause adverse health effects.
Carcinogenic assessment:	See Section 2

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**SECTION 4. FIRST-AID MEASURES**

THE FOLLOWING TABLE ADDRESSES EXPOSURE TO DUST AND FUME.

Eye Contact: Flush well with running water to remove particulate. Get medical attention.  
Skin Contact: Brush off excess dust. Wash area well with soap and water.  
Inhalation: Remove to fresh air. If condition continues, consult physician.  
Ingestion: Seek medical help if large quantities of material have been ingested.

**SECTION 5. FIRE FIGHTING MEASURES**

Extinguishing media: Solid material is not expected to burn. Use extinguisher suitable for surrounding media.  
Special procedures: None anticipated for solid product.  
Unusual hazard: None anticipated for solid product.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Accidental releases not expected to occur with solid material.

**SECTION 7. HANDLING AND STORAGE**

No special requirements needed with solid material.

**SECTION 8. EXPOSURE CONTROL / PERSONAL PROTECTION**

Respiratory protection: If fume or dust exists in excess of the limits stated in Section 2, appropriate respiratory protection is required. Respiratory protection must be in accordance with OSHA requirements.  
Protective gloves: As required  
Ventilation: Recommended if dust or fume is present to keep airborne concentrations below required limits stated in Section 2.  
Eye protection: Use appropriate safety eyewear as required.  
Other equipment: As required

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Melting point: Approximately 2500°F  
Boiling point: Approximately 5000°F  
Vapor pressure: N/A  
Vapor density (air=1): N/A  
Evaporation rate: N/A  
Solubility in water: Insoluble  
Specific gravity: Approximately 7.8 to 8.2 @ 60°F  
Molecular weight: N/A  
% volatile by volume: N/A  
Appearance: Various shapes  
Odor: Odorless metal

**SECTION 10. STABILITY AND REACTIVITY**

Incompatibilities: Reacts with strong acids to form H<sub>2</sub> gas  
Stability: Chemically stable  
Hazardous decomposition products: Metallic oxides  
Hazardous polymerization: Will not occur

**SECTION 11. TOXICOLOGICAL INFORMATION**

The material in its solid form does not constitute a toxicological threat.

**SECTION 12. ECOLOGICAL INFORMATION**

The material in its solid form does not constitute an ecological threat.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Solid scrap may be resold for re-use. Disposal of any dust must be done in strict accordance with any and all local, state or federal regulations.

**SECTION 14. TRANSPORT INFORMATION**

No specific transport requirements for material in solid form.

**SECTION 15. REGULATORY INFORMATION**

Not required for material in solid form.

**SECTION 16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. Teledyne Metalworking Products shall not be held liable for any damages resulting from handling or from contact with the above product. Questions should be directed to:

Jim Murray, Safety Director  
Teledyne Metalworking Products

#1 Teledyne Place  
LaVergne, TN 37086

615/641-4427

# MATERIAL SAFETY DATA SHEET

## I. PRODUCT IDENTIFICATION



### LANDIS THREADING SYSTEMS

RESELLER'S NAME: An Allegheny Teledyne Company  
ADDRESS: 360 South Church Street  
Waynesboro, Pennsylvania 17268-2659  
TRADE NAME: OSTER BESTOIL, Dark, or LANCUT Thread Cutting Oil  
CHEMICAL NAME: N/A  
COMMON NAME: Thread Cutting Oil

DATE: February 1, 1992  
PHONE: 1-888-565-0386  
REVISED: 7/20/98  
REVISED: 8/7/98

## II. HAZARDOUS INGREDIENTS

The terms "hazardous" and "hazardous materials" as used within this MSDS should be interpreted as defined by, and in accordance with, the OSHA Hazard Communication Standard (29 CFR Part 1910, 1200) including cited Appendices, Lists, References, etc., all of which are hereby incorporated by reference.

MATERIAL OR COMPONENT	CAS. REGISTRY NO.	%W	%V	Listed as Carcinogenic in NTP, IARC, or OSHA 1910 (z)	OSHA PEL (Mg/M <sup>3</sup> ) (See Sect. V below)	ACGIH TLV (Mg/M <sup>3</sup> )
SULFURIZED PARAFFIN OIL	68201-54-7	85.0	N/A	NO	-	-
SULFURIZED POLYBUTENE	72162-15-3	7.5	N/A	NO	-	-
SULFURIZED FAT	61790-49-6	2.5	N/A	NO	-	-
CHLORINATED PARAFFIN	63449-398	5.0	N/A	NO	-	-

## III. PHYSICAL DATA

BOILING POINT:	N/A	VISCOSITY @ 100F, SUS:	264
SPECIFIC GRAVITY (water = 1):	0.91	VAPOR PRESSURE:	N/A
VAPOR DENSITY (air = 1):	N/A	SOLUBILITY IN WATER:	Insoluble
% VOLATILES BY VOLUME:	N/A	EVAPORATION RATE:	N/A
APPEARANCE & ODOR:	Dark Clear Liquid, Mineral Oil Odor		

## IV. FIRE AND EXPLOSION DATA

FLASH POINT, COC:	370F	FIRE POINT: 400F
EXTINGUISHING MEDIA:	Foam Carbon Dioxide Dry Chemical	
SPECIAL FIRE FIGHTING PROCEDURE:	Wear self-contained breathing apparatus with full face piece, operated in pressure demand, or other positive pressures made when fighting fires.	
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignite by heat, pilot lights, or other flames and ignition sources at locations distant from material handling point.	

## V. HEALTH HAZARD INFORMATION

THRESHOLD LIMIT VALUE:	N/A
PERMISSIBLE EXPOSURE LIMIT:	500 ppm (Recommended OSHA specification for vaporized oil).
PRIMARY ROUTES OF ENTRY:	Eyes, Skin, Inhalation, Swallowing
EFFECTS OF OVEREXPOSURE:	Conditions to avoid: Eyes: May cause severe irritation, redness, or tearing. Skin: Prolonged or repeated contact can cause moderate irritation, defatting, or dermatitis. Inhalation/Swallowing: May cause nausea, vomiting, and diarrhea.
EMERGENCY AND FIRST AID PROCEDURES:	Eyes: Flush with large amounts of water, get medical attention. Skin: Thoroughly wash skin with waterless hand cleaner, then soap and water. Discard soaked clothing. Inhalation: Remove to fresh air. If breathing is difficult, use oxygen. Swallowing: Do not induce vomiting -- seek medical help.

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#### VI. REACTIVITY DATA

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STABILITY: Chemically Stable  
INCOMPATIBILITY (Materials to avoid): Avoid contact with strong oxidizing agents (peroxides, citric acid, chlorine, pure oxygen). Avoid exposure to copper materials such as copper tubing or copper storage containers.  
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Dioxide, Sulfur Dioxide, Hydrogen Chloride, and asphyxiants.  
HAZARDOUS POLYMERIZATION: Will not occur.

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#### VII. SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN CASE OF RELEASE OR SPILL: Eliminate all sources of ignition. Confine spill. Pump liquid to storage. Absorb spilled liquid with sand, clay, or earth floor absorbant.  
WASTE DISPOSAL METHOD: Burn under controlled conditions or deposit in disposal site in compliance with local, state, and federal regulations.  
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs.): N/A  
RCRA HAZARDOUS WASTE NO. (40 CFR 261.33): N/A  
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water): N/A

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#### VIII. SPECIAL PROTECTION INFORMATION

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RESPIRATORY PROTECTION (specify type): None is needed under anticipated use conditions with adequate ventilation. If exposure exceeds PEL use NIOSH/MISHA jointly approved respirator equipment.  
VENTILATION: LOCAL EXHAUST: As required to maintain exposure below PEL.  
MECHANICAL (General): N/A  
PROTECTIVE GLOVES (Specify type): Neoprene Nitrite Rubber.  
EYE PROTECTION: OSHA approved chemical splash goggles.  
OTHER PROTECTIVE EQUIPMENT: Wear impervious clothing and boots.

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#### IX. SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Handle as above. Storage per NFPA Class IIIb (Combustible liquid having a flash point above 200F/93.4C).

While the information set forth in this material safety data sheet is believed to be accurate, as of the effective date, Teledyne Landis Machine makes no representations regarding the accuracy or completeness of the information and assumes no liability for any loss, damage, or injury of any kind which may result from or arise out of the use or reliance on the information by any person.

N/A - NOT APPLICABLE

#### HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH-----1

FLAMMABILITY-----1

REACTIVITY-----0

PROTECTION-----0

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